CLAIMS

- 1. A method for detecting leaked buffer writes between a first consistency point and a
- 2 second consistency point, the method comprising:
- receiving a write operation directed to a file;
- 4 creating a data buffer associated with the write operation; and
- writing a buffer check control structure to a raw data buffer associated with the
- 6 data buffer.
- 2. The method of claim 1 wherein the step of creating the data buffer further comprises
- the step of creating a buffer control structure and a raw data buffer.
- 3. The method of claim 2 wherein the buffer control structure comprises a pointer to the
- 2 raw data buffer.
- 4. The method of claim 1 wherein the step of writing the buffer check control structure
- to the raw data buffer further comprises the steps of:
- creating the buffer check control structure; and
- 4 overwriting a portion of the raw data buffer with the buffer check control struc-
- 5 ture.
- 5. The method of claim 1 wherein the step of writing the buffer check control structure
- 2 to the raw data buffer further comprises the steps of:
- creating the buffer check control structure; and
- associating the buffer check control structure to the raw data buffer in a contigu-
- 5 ous block of memory.
- 6. The method of claim 4 wherein the buffer check control structure comprises:
- one or more magic numbers; and
- a consistency point number.

- 7. The method of claim 6 wherein the one or more magic number comprises a 64-bit
- 2 value.
- 8. The method of claim 6 wherein one or more magic number values comprises two 32-
- 2 bit values.
- 9. The method of claim 6 wherein the consistency point number identifies a current con-
- 2 sistency point.
- 1 10. The method of claim 6 wherein the consistency point number comprises a 32-bit
- 2 value.
- 11. A method for detecting leaked buffer writes between a first consistency point and a
- 2 second consistency point, the method comprising steps of:
- 3 selecting a data buffer;
- determining if the selected data buffer includes a buffer check control structure;
- determining, in response to the selected data buffer including a buffer check con-
- trol structure, if a consistency point number within the buffer check control structure is
- 7 correct; and
- performing, in response to determining that the consistency point number within
- 9 the buffer check control structure is correct, a write operation of the file system buffer.
- 1 12. The method of claim 11 wherein the step of determining if the data buffer comprises
- a buffer check control structure further comprises a step of determining if one or more
- magic values are within the data buffer.
- 1 13. The method of claim 12 wherein one or more magic values comprise a 64-bit magic
- 2 number.

- 14. The method of claim 12 wherein one or more magic values further comprises two 32-
- bit magic numbers.
- 15. The method of claim 11 wherein the step of determining if the consistency point
- 2 number is correct further comprises the step of determining if the consistency point num-
- ber within the buffer check control structure equals a consistency point number identify-
- 4 ing a current consistency point.
- 16. The method of claim 11 wherein the step of performing a write operation further
- comprises a step of writing a set of raw data within the data buffer to disk.
- 17. The method of claim 16 wherein the raw data comprises the buffer check control
- 2 structure.
- 18. The method of claim 16 wherein the step of performing the write operation further
- 2 comprises a step of removing the buffer check control structure from the data before
- writing the file system buffer to disk.
- 19. The method of claim 16 wherein the step of performing the write operation comprises
- the step of writing only the raw data within the file system buffer to disk.
- 20. A system for detecting leaked buffer writes between a first consistency point and a
- second consistency point, the system comprising:
- means for receiving write operations;
- 4 means for creating a data buffer associated with the file; and
- 5 means for writing a buffer check control structure to a raw data buffer associated
- 6 with the data buffer.